

Climate Database Modernization Program: FY2010 Continuing Proposal

A. Name of organization and task leader:

NOAA/OAR Earth System Research Laboratory (ESRL), Scott Woodruff

B. Contact information: NOAA/ESRL/PSD3

325 Broadway, Boulder, CO 80305

Phone: (303) 497-6747 Fax: (303) 497-6181

e-mail: Scott.D.Woodruff@noaa.gov

C. Title of task: **REcovery of Logbooks And International Marine Data (RECLAIM) Project**

(Original FY2006 task order #L-23)

D. Accomplishments in FY2009:

This task represents the NOAA Research component of a continuing multi-year effort—the RECLAIM project—to rescue undigitized meteorological data and metadata from ship logbooks, and help support blending into ICOADS (Woodruff et al. 2009a). Through ICOADS, the data are then widely utilized for critical climate studies including historical reanalysis (Compo et al. 2006). In addition to ongoing contributions toward the *English East India Company Digitization* (described separately under task order L-23), Dr. Clive Wilkinson's FY2009 accomplishments, closely linked into the Atmospheric Circulation Reconstructions over the Earth initiative (<http://www.met-acre.org/>), included:

Continuing support for the Extended WWI Royal Navy (RN) Ship's Logs: 1914-23: Similarly to the WWII project (Brohan et al. 2008), an appropriate set of logbooks was selected (~295K images). Due to subsequent funding restrictions only ~150K images were produced in 2009. As no UK funding appears available beyond imaging, digitization is proposed below as a priority for CDMP.

Ships of Exploration/Survey Vessels/Colonial Met Registers: Linked to ACRE, funding was secured at the end of 2008 for the 1-year CORRAL Project to image and digitize daily logbooks from voyages of discovery (1700-1850), vessels of the Hydrographic Survey (1830-50), and other UK materials. RECLAIM produced an inventory of suitable candidates with movements, archive references and platform metadata. Many of the resulting images are now available from the British Atmospheric Data Centre (BADC) at <http://badc.nerc.ac.uk/data/corral/>.

UK Hydrographic Office (UKHO) Remarks (1759-1909; ~6K) Books: An inventory of these was completed via ACRE in 2008, and a final report produced in 2009 describing the data and discussing their relationship to RN Ship's Logs.

Additional activities: Dr. Wilkinson represented RECLAIM/CDMP as part of an ACRE initiative to exploit the meteorological archives of Chile. A synthesis planning document, was significantly revised including extensive input from ACRE and other UK and US partners, with the aims of assembling overview information for the wealth of emerging candidates for rescue of marine data and metadata, and seeking to develop consensus priorities (Woodruff et al. 2009b).

E. Scope of work proposed in FY2010:

RECLAIM coordination will continue toward completion of the *English East India Company Digitization* (L-23). Also, indexing onto WSSRD and digitization

by CDMP of the *Extended WWI UK RN Ship's Logs* collection are proposed (possibly with subsequent translation assistance by the UK). As a related activity, additional inventory and comparison work remains an important ongoing requirement to resolve questions surrounding separately archived RN Met. Logs (extending back to the 1850s), versus the partly overlapping Ship's Logs, including the long-term possibility of recovering ship names and other metadata. In addition, Dr. Wilkinson will also continue to be involved with the following newly identified collections and activities:

- a) Continuing support for ACRE/Chile initiative.
- b) Joint RECLAIM/ACRE initiative to document and source collections of marine data connected to international marine scientific expeditions.
- c) Continuing work at the Royal Geographical Society.
- d) Joint RECLAIM/ACRE Investigation of the collections of the Royal Society.
- e) Investigations of the archive at the Climatic Research Unit (UEA).
- f) Investigation of the collection at St. Andrew's University of whale fishery catch books and other marine related documents.

Linkages are also still planned with two proposed new UK projects: (1) A large multidisciplinary project with *Exeter University Maritime Studies* envisioned to study the operations of the RN from 1815-99 in conjunction with providing data and metadata for scientific research. (2) *Whaling Logbook Project* with the Univ. Hull and other UK partners, planned to explore UK whaling ship logbooks (>200), some of which date back to C18th. Their lack of instrumental data is compensated for by the value of daily wind force, wind direction, and ice cover data for the very far northern latitudes.

F. An estimate of the time needed for your agency: Estimated \$39K for ESRL salary support. Funding is required to help continue to coordinate the logistical arrangements and cooperative efforts to image and digitize the logbooks, help plan and implement conversion and blending of the digital data into ICOADS, and for continuing organization of the international RECLAIM project, including maintenance and continuing development of the project website.

References

- Brohan, P., R. Allan, J.E. Freeman, A. Waple, D. Wheeler, C. Wilkinson, and S. Woodruff, 2008: Marine observations of old weather. *Bull. Amer. Meteor. Soc.*, **90**, 219-230.
- Compo, G.P., J.S. Whitaker, and P.D. Sardeshmukh, 2006: Feasibility of a 100 year reanalysis using only surface pressure data. *Bull. Amer. Met. Soc.*, **87**, 175-190.
- Wilkinson, C., S.D. Woodruff, P. Brohan, S. Claesson, E. Freeman, F. Koek, S.J. Lubker, C. Marzin, D. Wheeler, 2009: RECOVERY of Logbooks And International Marine Data: The RECLAIM Project. *Int. J. Climatol.* (submitted).
- Woodruff, S.D., S.J. Worley, S.J. Lubker, Z. Ji, J.E. Freeman, D.I. Berry, P. Brohan, E.C. Kent, R.W. Reynolds, S.R. Smith, and C. Wilkinson, 2009a: ICOADS Release 2.5: Extensions and Enhancements to the Surface Marine Meteorological Archive. *Int. J. Climatol.* (submitted).
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